**Priority Technical Work to Prepare for Water Plan Update 2013**
**Based on Feedback from August 19, 2010 SWAN Workshop**

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**Integration/Coordination of Analysis:**

1. Improve integration of analyses conducted for the Water Plan with analyses for Bay-Delta Conservation Plan, Delta Plans, salinity studies, San Joaquin restoration studies, etc. 27 votes

**WEAP Calibration:**

2. Improve calibration of snowmelt and rainfall-runoff processes of the upper watersheds. 16 votes.
3. Improve calibration of Delta management (i.e., Delta operations). 8 votes.
4. Improve calibration of groundwater balance. 7 votes.
5. Conduct split sample calibration/validation of the WEAP model. 3 votes.
6. Improve calibration of irrigated agriculture, urban, and managed wetlands water uses. 1 vote.
7. Improve calibration of operation of major reservoirs. 0 vote.

**Model Enhancements (WEAP and non-WEAP):**

8. Build in WEAP, linkages to work with comprehensive groundwater models (e.g., MODFLOW, etc.). 4 votes.
9. Improve modeling capabilities to assess water quality (not just temperature) in reservoirs and rivers (in WEAP or outside of WEAP). 3 votes.
10. Implement in WEAP, the ANN (artificial neural network) model for Delta water quality simulation as used by the CalSim model. 3 votes.
11. Make use of satisficing threshold criteria to evaluate response packages similar to that done for Inland Empire Utilities Agency (IEUA) in the evaluation of its 2005 Urban water Management Plan (UWMP). 2 votes.
12. Improve capabilities of WEAP so that its outputs can be used as inputs to other models to assess impacts on aquatic species and riparian habitats. 1 vote.

**Reporting of Model Results:**

13. Characterize and document the uncertainties in WEAP model results and parameters so that policy managers understand the uncertainties when they consider various options. 17 votes.
14. Refine details of water demands and supplies within each Planning Area, e.g., show demands and supplies by source of supply. 5 votes.

15. Report seasonal variation of simulated groundwater levels. 1 vote.
16. Address the issue of imperfect resilience of the response packages evaluated. 1 vote.

**Analysis:**

17. In addition to the 12 climate change scenarios utilized in the Water Plan, apply the approach and set of climate scenarios adopted in the Bay-Delta Conservation Plan. 11 votes.
18. Decouple consideration of land use and population in the scenarios. 11 votes.
19. Analyze flood management strategies in conjunction with water supply strategies. 10 votes.
20. Apply Robust Decision Making (RDM) techniques presented on August 19, 2010 SWAN Workshop to evaluate water management strategies rather than focus on three pre-defined scenarios. 5 votes.
21. Expand the number of water management strategies to evaluate beyond those in the initial list that includes water use efficiency, conjunctive management and groundwater storage, recycled municipal water, and system reoperation. 4 votes
22. Compare historical flows with streamflows under climate change. 4 votes
23. Include a water response package that identifies the most economically efficient mix of strategies for a region. 3 votes.
24. For Update 2013, expand the geographic scope of the Planning Area Model beyond the Central Valley. 2 votes.
25. Include water transfers in the analysis. 2 votes.

**Other Suggestions:**

26. Estimate natural stream flows downstream of major reservoirs. Unimpaired flow estimates upstream of the major reservoirs are reasonable approximations of natural flows. 2 votes.